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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,772	09/24/2003	Thomas M. Barbara	03-03 US	4369

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Varian Inc.
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EXAMINER	
VIJAYAKUMAR, KALLAMBELLA M	
ART UNIT	**PAPER NUMBER**
1751	

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/669,772	BARBARA ET AL.	
	Examiner	Art Unit	
	Kallambella Vijayakumar	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) *5 and 16-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

- Claims 1-19 are currently pending with the application.
- The examiner has considered the IDS filed 09/24/2003 and 06/06/2005.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-15, drawn to an amorphous composition, classified in class 252, subclass 518.1.

II. Claims 16-19, drawn to NMR apparatus, classified in class 324, subclass 307.

Inventions II and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the claimed NMR is functional with a Ho^{3+} matrix. The subcombination has separate utility such as a luminescent device.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, and the inventions require a different field of search (see MPEP § 808.02), and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

This application contains claims directed to the following patentably distinct species: Epoxy, Glass and Plastic. The species are independent or distinct because they constitute different amorphous matrixes with different functionality and classification.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, amorphous matrix in claim-1 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Further, Claims 1 and 11 generic to the following disclosed patentably distinct species: Gd (III), Fe(III) and Mn(III). The species are independent or distinct because the search needed for one is not required for the other. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

During a telephone conversation by Mark Kopec with Bell Fisherman on 04/03/2006 a provisional election was made with traverse to prosecute the invention of **Group-I, claims 1-15**, and **species of Gd (III) and epoxy resin/polymer**. Affirmation of this election must be made by applicant in replying to this Office action. Claims 16-19 <non-elected-invention> and claim-5 < non-elected species> are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-2, 4, 6-12 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Halverson et al (US 3,377,292).

Halverson discloses a photoluminescent composition containing a lanthanide chelate such as Gd-ethyl stearoylacetate incorporated in a solid plastic (C-1, Ln 22-23; C-3, ln 24-30, 46-75). With regard to claim-4, the prior art teaches a composition containing epoxy resin (C-15, Ex-29, Ln 45). With regard to method claims, the prior art teaches making the composition by mixing the components identical to that by the applicants (C-15, Ex-29). The dispersion of Gd^{3+} in the polymer/plastic matrix and the properties in claims 1, 7-9, 11 and 14 will be inherent in the prior art composition, because it is identical to that by the applicants and further made by an identical process using identical components, and identical compositions have identical properties. All the limitations of the instant claims are met.

The reference is anticipatory.

2. Claims 1-3, 6-13 and 15 are rejected under 35 U.S.C. 102(e/a) as being anticipated by Hofacker et al US 2003/0125576).

Hoffacker et al teach an aliphatic oligocarbonate polyol prepared by the transesterification of organic oligocarbonate with aliphatic polyol in presence of a catalyst comprising Gd-tris(2,2,6,6-tetramethyl-3,5,heptane dionate) <Gd (TMHD)> (Abstract; Pg-2, Para 0017). The catalyst was used either as a solid or in solution in an amount of 0.01-10,000 PPM (Para 0018-19) that inherently mixes homogeneously and incorporated in the resultant composition. With regard to method claims, the prior art teaches making the composition by mixing the components identical to that by the applicants (Para 0020, 0029). The dispersion of Gd^{3+} in the polymer matrix and the properties in claims 1, 7-9, 11 and 14 will be inherent prior art composition, because it is identical to that by the applicants, and further made by an identical process using identical components, and identical compositions have identical properties. All the limitations of the instant claims are met.

The reference is anticipatory.

3. Claims 1, 4, 7-11 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Mallener et al (US 4,756,869).

Mallener et al teach a coating containing epoxy resin lacquer and gadolinium oxide (C-5, Ex-2). Gadolinium oxide meets the limitation of a metal ion containing Gd (III) and a ligand over the applicant's disclosure of its addition in borosilicate glass (Spec: US 2005/0062022). The dispersion of Gd^{3+} in the polymer/plastic matrix and the properties in claims 1, 7-9, 11 and 14 will be inherent in the prior art composition, because it is identical to that by the applicants and further made by an identical process using identical components, and identical compositions have identical properties. All the limitations of the instant claims are met.

The reference is anticipatory.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halverson et al (US 3,377,292) in view of Zheng et al (J. Mater. Chem, 2001,11, 2615-2619).

The disclosure on the composition and method of making the composition by Halverson et al as set forth in rejection-1 under 35 USC 102(b) is herein incorporated.

The prior art teaches various diketonates of lanthanides in the composition, but is silent about the specific diketonates in the composition.

In the analogous art, Zheng et al teach electroluminescence properties of Tb and Gd diketonates including Gd(acac)3 (Title, Abstract, Page 2617, C-1, para-2, Fig-4) (Also, See Abstracts from Yinping et al and Deqing et al, J. RareEarths, 2004.2: for photoluminescence of Gd Chelates).

It would have been obvious to a person of ordinary skill in the art to substitute the Gd chelate in the composition of Halverson et al with the Gd(acac)3 of Zheng et al as functional equivalents with reasonable expectation of success, because combined prior art is suggestive of the claimed composition and method.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cited in PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kallambella Vijayakumar whose telephone number is 571-272-1324. The examiner can normally be reached on 8.30-6.00 Mon-Thu, 8.30-5.00 Alt Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMV
May 17, 2006.

Douglas M Ginty
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SUPERVISORY PATENT EXAMINER
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